

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-004545**Date Inspected:** 01-Nov-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 830**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Chen Xi**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG & Tower**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Mike Hasler was present to observe the fitup, welding and related activities associated with the fabricating of Caltrans Orthotropic Box Girder (OBG) and Tower, for the San Francisco Oakland Bay Self Anchored Suspension Bridge, at Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island.

Item	Description	WBS	Dwg No.	Status
1	PMT OBG	NA	NA	Welding and Macroetch S

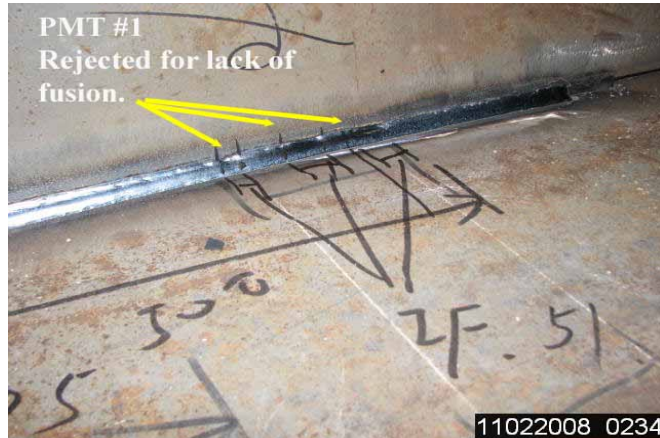
Bay 1: Caltrans QA inspector monitored OBG Production Monitoring Test (PMT) #2, Gantry #2, deck panels DP153-001 and DP180-001. The magnetic particle test (MT) of the tack welds was performed by ZPMC QC/MT inspector, Mr. Wang Wei. The visual inspection of tack welds and root gap was performed by ABF, ZPMC and Caltrans. The ABF inspector is identified as Ms. Lv Yum and ZPMC QC/CWI inspector, Mr. Chen Xi. Caltrans QA inspector verified and documented the welding amperage, voltage and travel speed during the gas metal arc welding (GMAW) and submerged arc welding (SAW) process, welds 1 thru 6. At the completion of the GMAW root pass and SAW cover pass. The welds were visually inspected by ABF, ZPMC and Caltrans. Caltrans QA inspector witness ZPMC QC/UT inspector identified as Tang Xingshan inspect the welds for depth of penetration and conformance. Caltrans QA inspector identified designated locations for macroetch sampling per contract requirements. The macroetch specimens were evaluated with a 7X optical loop and accepted by ZPMC, ABF and Caltrans. See Caltrans U-ribs PMT Inspection Sheet, dated 11-02-2008 and ZPMC production monitoring test plate inspection report, dated 11-02-2008 for additional information.

PMT #1 was rejected by ZPMC after the welding of the SAW cover pass welds. Weld number one (1) was rejected by Mr. Chen Xi for lack of fusion at the weld toe joining the U-rib. ZPMC QA inspector, Mr. Chen Xi directed ZPMC to

WELDING INSPECTION REPORT

(Continued Page 2 of 2)

weld a replacement PMT identified as PMT #2. The following digital picture illustrates PMT #1, weld 1 reject.



2	Deck Panel OBG	NA	NA	Tackweld Evaluation
Assembly Shop: Caltrans QA inspector recorded the Y-locations for deck panel DP270-001. Approximately 47 locations were identified for further evaluation. See U-rib to Deck Plate- Tack Weld Assessment Record, dated 11-01-08 for additional information.				
3	Tower Skin Plates Tower	NA	NA	QA-MT
Heavy Shop 1: Caltrans QA inspector performed magnetic particle test (MT) inspection per ZPMC notification of witness inspection, document number 001332. The subassemblies are identified as Lift 1 skin "B", weld NSD1-SA11A/F-2B & 1B, and Lift 1 skin "A", weld NSD1-SA159D/J-2B. Caltrans QA inspector observed that the welds have been MT inspected and identified as accepted by ZPMC QC, Mr. Wang Wei. Caltrans QA-MT coverage was approximately 10%. The welds appeared to be in conformance with the project specifications. See Caltrans Magnetic Particle Test Report (TL-6028) dated, November 01, 2008 for additional information.				

Summary of Conversations:

As identified within the contents of this report.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Ady Velasco, 138-1694-2685, who represents the Office of Structural Materials for your project.

Inspected By:	Hasler, Mike	Quality Assurance Inspector
Reviewed By:	Cuellar, Robert	QA Reviewer
